

Date: Tuesday, 7/1/2008 2:35:03 PM  
User: Kim Johnston

# Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : EXTRUSION 'I' BEAM WEB 4"
Job Number : 40196	
Estimate Number : 10155	
P.O. Number :	Part Number : D25003100
This Issue : 7/1/2008 S.O. No. :	Drawing Number : D2500 <del>UNDER REVIEW</del> OK P 08.07.02
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : SKIDTUBES	Drawing Revision : G
Previous Run : 33940	Material :
Written By :	Due Date : 7/30/2008 Qty: 110 Um: Each
Checked & Approved By : <u>AD 08 07.01</u>	
Comment : Est: E 02.09.10 Added DSK 066KJ	
est F 07.07.06 rev G dwg EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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Comment: PURCHASING

Issue P/O: 6671

a) Extrude as per Dwg D2500

b) Material: 6061-T6 (QQ-A-200/8) ~~OR~~ ASM B221 P 08.07.02

c) Minimum yield tensile strength = 35 ksi

d) Minimum ultimate tensile strength = 38 ksi

e) Minimum elongation = 10%

f) Order at 100" long

g) Caradon Indalex Tool # MS-18867

h) To be packed per DSK 066

i) Pull test to ASTM standard B221 required.

j) Material certification is required

2.0	D25003100P	Ext'n -I' Beam Web 4"
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 110.0000 Each(s)

EXTRUSION 'I' BEAM WEB 4"

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure material certification is attached

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Inspect dimensions per Dwg D2500

Check Pull test per Dwg D2500 for compliance page attached.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Tuesday, 7/1/2008 2:35:03 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: EXTRUSION 'I' BEAM WEB 4"

Job Number: 40196

Part Number: D25003100

Job Number:



Seq. #:

Machine Or Operation:

Description :

Check hardness with Webster tester

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

*Land my gear skids / HALL 005 / 08/07/28*

6.0

QC21

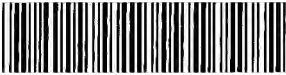
FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*08/07/31*

Job Completion

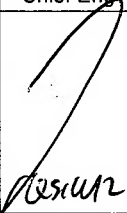

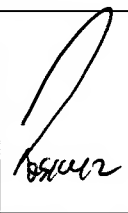
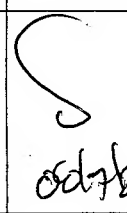


*MF 08-07-30*

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2500-3-100 PAR #: N/A Fault Category: Prod/Std Hbes NCR: Yes No DQA: D Date: 08/07/31  
 QA: N/C Closed: D Date: 08/07/31

NCR: <u>40196</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
8/7/29	52	During Sizing it was found that 1 beam was damaged. RC		Scrap and Destroy No Replx QTY (80)	M 8-7-29	 08/07/29	 08/07/29	 08/07/29

NOTE: Date & initial all entries



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2500	REV. G SHEET 1 OF 3
DATE 07.04.17		TITLE EXTRUSION	SCALE NTS
A	96.03.19	NEW ISSUE	
B	96.03.24	CHANGE INTERNAL WEB	
C	96.04.26	ADD D2500-3 WEB	
D	96.10.07	ADD MATERIAL PROPERTIES	
E	96.10.24	CHANGE MATERIAL TEMPER	
F	97.09.29	CHANGE MAT. TO 6061-T6	
G	07.04.17	ADD NOTES 3,5,6	

**RELEASED**  
07.06.28 *[Signature]*

**UNDER REVIEW**

08.04.02 *[Signature]*  
FOR REV. H

1. MATERIAL: 6061-T6 (QQ-A-200/8)

MINIMUM TENSILE YIELD STRENGTH = 35 KSI  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI  
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO  
ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY  
TO ENSURE THAT THE BATCH MEETS THE ABOVE  
MINIMUM MECHANICAL PROPERTIES

2. BREAK ALL SHARP CORNERS 0.010 MAX
3. ALL DIMENSIONS ARE IN INCHES
4. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

5. FOR D2500-1 PART NUMBER IS D2500-1-XXX WHERE  
CUT LENGTH (EX. D2500-1-190 IS 190" LONG)  
D2500-1 EXTRUSION MANUFACTURED FROM:

- A) BON L DIE # 897015 -> PREFERRED  
B) CARADON MIDEAST DIE # PAH-28030  
C) CARADON MTL DIE # MH-18868

6. FOR D2500-3, PART NUMBER IS D2500-3-XXX WHERE XXX IS  
CUT LENGTH IN INCHES (EX. D2500-3-100 IS 100" LONG)  
D2500-3 EXTRUSION MANUFACTURED FROM:

- A) CARADON INDALEX DIE # MS-18867

~~XXX~~ COPY IS  
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WITHOUT NOTICE  
WORK ORDER  
NO. 40196

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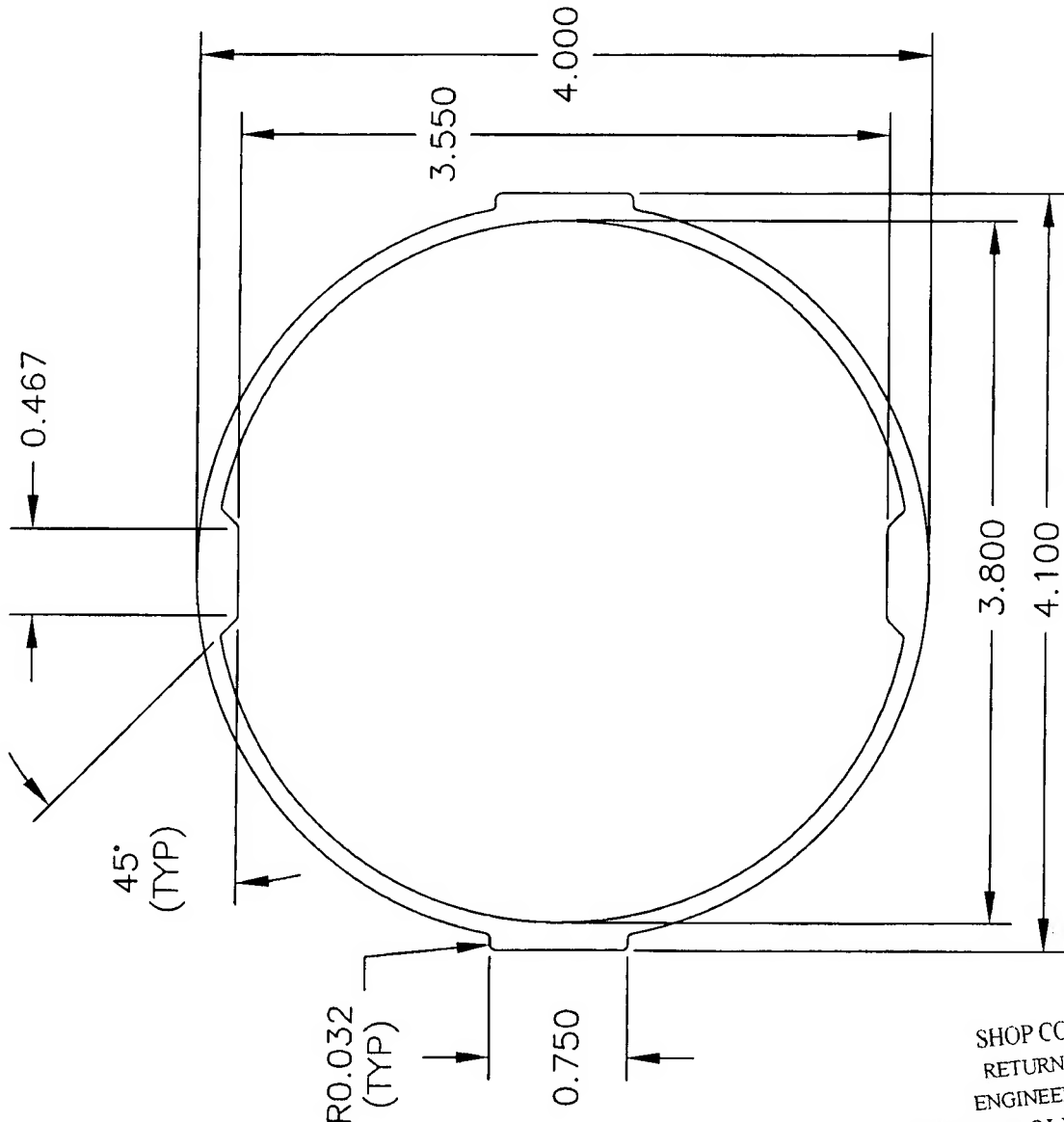


DESIGN #	DRAWN BY RH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2500	REV. G SHEET 2 OF 3
DATE 07.04.17		TITLE EXTRUSION	SCALE 1:1

RELEASED  
07.06.28 #

UNDER REVIEW

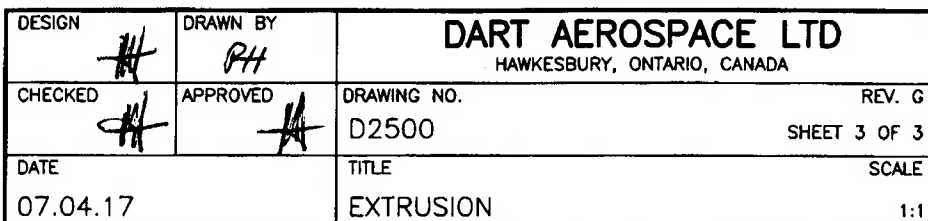
08.04.02 UP  
FOR REV. H



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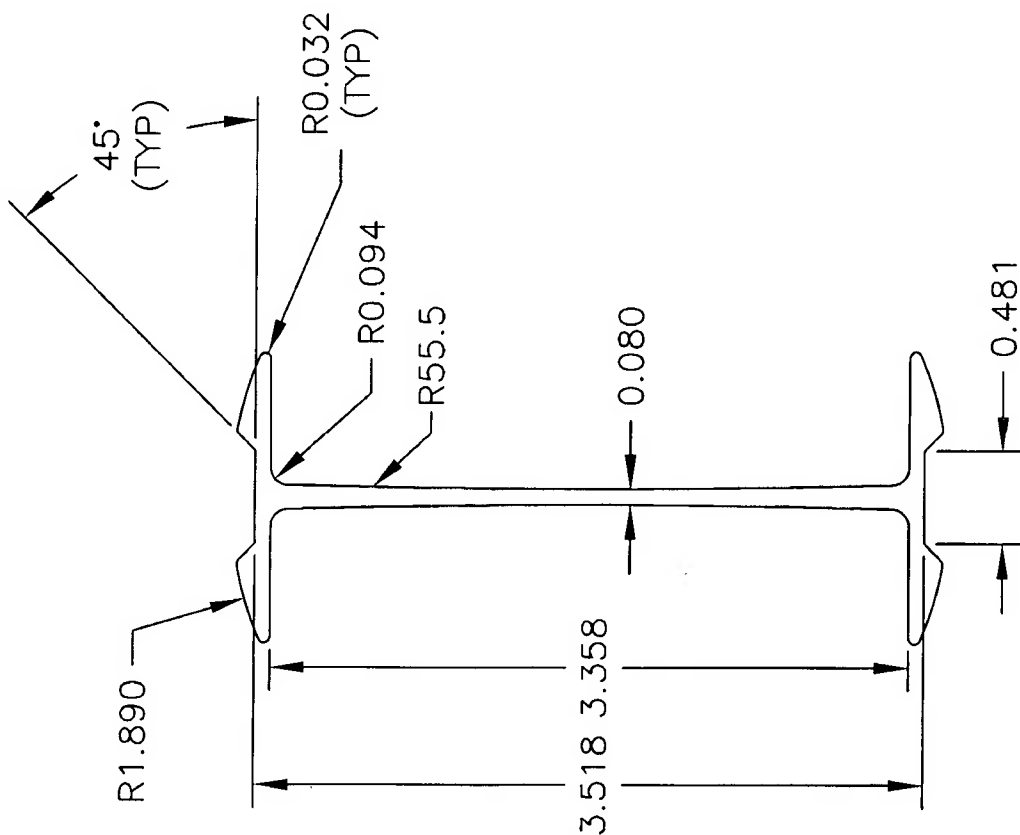
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RELEASED  
07 06 28 #

# UNDER REVIEW

08-04-02 UP  
FOI REV. H



**D2500-3**

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DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY, ONT

EXPORT / SHIP TO

INDICATIONS SPECIAL  
SPECIAL INSTRUCTIONS

P/S#: 670126

NOTRE NUMÉRO DE COMM.  
OUR ORDER NO.

**E-070705**

ME ME SAME

K6A1K7

CUSTOMER P.S.T.: \*6122-5207

INDALEX G.S.T. REG NO: R136834041

PROJ:

Required Date:  
080725

N° DU CLIENT CUST NO.		T.P.S. G.S.T.		TAXE DE VENTE PROV. PROV SALES TAX		N° DE COMMANDE CUST. ORDER NO.		DATE DE COMMANDE ORDER DATE		NOTRE DATE DE COMM. OUR CREDIT DATE		CONDITIONS TERMS	
201355		XXXXXX				6671		8/07/04		8/07/04			
VENDEUR SALESMAN	EXPEDIE PAR SHIP VIA	PAYE PPD.	PERC. COL.	C.A.D. C.O.D.	F.A.T. F.O.B.	EN DEUX PARTS PRINCIPAL AND TAPE		CARTONNE CARTONED		CARTONNE & INTERCALEE CARTONED & INTERLEAVED			
51		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			

DATE DE LIVRAISON DATE SHIPPED	8/07/24	ENVOYÉ PAR SHIPPED VIA	OTTAWA 25 JUIL.
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N° ITEM ITEM NO.	COMMANDE / ORDERED		N° DE MATRICE INDEX DIE NO.	DESCRIPTION DU CLIENT CUSTOMER DESCRIPTION	ALLIAGE ET TREMPAGE ALLOY AND TEMPER	LONGUEUR LENGTH	PRIX UNITAIRE UNIT PRICE
	POIDS WEIGHT	PIÈCES PIECES					
				F EXTRUDE ONLY			
				DUE=2008/07/25 07-25			
✓	1 499	167	MS 18867	D2500-3-100 6061 T6		2540	
				D2500-3			
				BUNDLE= 839254 839264			
<p>We hereby certify that the material supplied meets the chemical properties as published by the Aluminum Association, and requirements of our Quality procedures</p> <p>*✓</p> <p><i>AS 6810A/25</i></p> <p><i>ISO 9001</i></p> <p><i>W. J. Brown</i></p>							

[illegible]

EXEMPLAIRE DE LA COMPTABILITÉ  
ACCOUNTING COPY

**FEUILLE D'EMPAQUETAGE**  
**PACKING SLIP**





325 rue Avro  
Pointe-Claire QC H9R 5W3

Téléphone (514) 697-5120  
Fac-simile (514) 694-8310

## Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**  
 Adresse / Address : **1270 ABERDEEN STREET  
HAWKESBURY ONT,  
K6A 1K7**  
 # commande Indalex / Indalex order # : **8070705**  
 # bon de commande / Purchase order # : **6671**  
 # de matrice / Die # : **MS 18867** Description : **D2500-3**  
 Alliage & trempage / Alloy & temper : **6061 T6**  
 # Contrôle / Control # : **79891-2**  
 # Coulée / Cast # : **43820**

*08/7/28*

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	40 534
Contrainte élastique Yield stress (psi)	35 000	37 653
% élongation dans 2" % elongation in 2"	8	12
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	91

### Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 - 0,24	0,48 - 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	---	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221 excepté pour la section 8.2 (nombre de spécimen) et AMS QQA 200/8 excepté pour la section 4.2.3.1 (nombre de spécimen) qui sont déterminés par les exigences du client.

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221 except for section 8.2 (number of specimen) and AMS QQA 200/8 except for section 4.2.3.1 (number of specimen) which is determined by customer requirement.

Sincèrement vôtre,  
Yours truly,

date : **2008-07-18**

*Patrick Bader*

Patrick-Martin Bader  
Technicien de la qualité  
Quality technician

Indalex Limited